

WHAT IS CLAIMED IS:

- 1           1.       A method for input parameter binding, comprising:  
2               when executing a statement, comparing data in an application structure of the  
3       statement with optimization information in a bind-in structure; and  
4               when there is a match between the data in the application structure and data in the  
5       optimization information in the bind-in structure, executing the statement with the  
6       optimization information.  
.
- 1           2.       The method of claim 1, further comprising:  
2               when there is not a match between the data in the application structure and the  
3       optimization information, regenerating optimization information.
- 1           3.       The method of claim 1, further comprising:  
2               at bind time, storing the optimization information in the bind-in structure.
- 1           4.       The method of claim 1, wherein the optimization information includes at  
2       least one of data type, length, Coded Character Set Identifier, an array size, an indication  
3       of whether conversions are required, and an indication of whether the required  
4       conversions are valid.
- 1           5.       The method of claim 1, further comprising:  
2               for fixed length data,  
3                       storing an increment length by which a data pointer that is pointing to data  
4       in an application program area is to be incremented to find a location of a next data  
5       value; and  
6                       calculating the location of the next data value by adding the increment  
7       length to the data pointer.

1           6.     The method of claim 1, further comprising:  
2           for distributed processing, at a client computer, calculating a location of data in a  
3 client communications buffer.

1           7.     The method of claim 1, further comprising:  
2           for distributed processing, at a server computer, calculating a location of data in a  
3 server communications buffer.

1           8.     The method of claim 1, further comprising:  
2           for distributed processing, at a client computer, calculating a location of data in an  
3 application program address space.

1           9.     The method of claim 1, further comprising:  
2           when returning a handle to a cursor to a result set from a stored procedure to an  
3 application, recalculating the optimization information.

1           10.    A method for output parameter binding, comprising:  
2           when executing a statement, comparing data in an application structure of the  
3 statement with optimization information in a bind-out structure; and  
4           when there is a match between the data in the application structure and data in the  
5 optimization information in the bind-out structure, executing the statement with the  
6 optimization information.

1           11.    The method of claim 10, further comprising:  
2           when there is not a match between the data in the application structure and the  
3 optimization information, regenerating optimization information.

1           12.    The method of claim 10, further comprising:  
2           at bind time, storing the optimization information in the bind-out structure.

1           13.    The method of claim 10, wherein the optimization information includes at  
2    least one of data type, length, Coded Character Set Identifier, an array size, an indication  
3    of whether conversions are required, and an indication of whether the required  
4    conversions are valid.

1           14.    The method of claim 10, further comprising:  
2           for fixed length data,  
3                    storing an increment length by which a data pointer that is pointing to data  
4    in an application program area is to be incremented to find a location of a next data  
5    value; and  
6                    calculating the location of the next data value by adding the increment  
7    length to the data pointer.

1           15.    The method of claim 10, further comprising:  
2           for distributed processing, at a client computer, calculating a location of data in a  
3    client communications buffer.

1           16.    The method of claim 10, further comprising:  
2           for distributed processing, at a server computer, calculating a location of data in a  
3    server communications buffer.

1           17.    The method of claim 10, further comprising:  
2           for distributed processing, at a client computer, calculating a location of data in an  
3    application program address space.

1           18.     The method of claim 10, further comprising:  
2           when returning a handle to a cursor to a result set from a stored procedure to an  
3     application, recalculating the optimization information.

1           19.     An article of manufacture including a program for input parameter  
2     binding, wherein the program causes operations to be performed, the operations  
3     comprising:  
4           when executing a statement, comparing data in an application structure of the  
5     statement with optimization information in a bind-in structure; and  
6           when there is a match between the data in the application structure and data in the  
7     optimization information in the bind-in structure, executing the statement with the  
8     optimization information.

1           20.     The article of manufacture of claim 19, wherein the operations further  
2     comprise:  
3           when there is not a match between the data in the application structure and the  
4     optimization information, regenerating optimization information.

1           21.     The article of manufacture of claim 19, wherein the operations further  
2     comprise:  
3           at bind time, storing the optimization information in the bind-in structure.

1           22.     The article of manufacture of claim 19, wherein the optimization  
2     information includes at least one of data type, length, Coded Character Set Identifier, an  
3     array size, an indication of whether conversions are required, and an indication of  
4     whether the required conversions are valid.

1           23.     The article of manufacture of claim 19, wherein the operations further  
2 comprise:  
3           for fixed length data,  
4                   storing an increment length by which a data pointer that is pointing to data  
5 in an application program area is to be incremented to find a next data value; and  
6                   calculating the location of the next data value by adding the increment  
7 length to the data pointer.

1           24.     The article of manufacture of claim 19, wherein the operations further  
2 comprise:  
3           for distributed processing, at a client computer, calculating a location of data in a  
4 client communications buffer.

1           25.     The article of manufacture of claim 19, wherein the operations further  
2 comprise:  
3           for distributed processing, at a server computer, calculating a location of data in a  
4 server communications buffer.

1           26.     The article of manufacture of claim 19, wherein the operations further  
2 comprise:  
3           for distributed processing, at a client computer, calculating a location of data in an  
4 application program address space.

1           27.     The article of manufacture of claim 19, wherein the operations further  
2 comprise:  
3           when returning a handle to a cursor to a result set from a stored procedure to an  
4 application, recalculating the optimization information.

1           28.    An article of manufacture including a program for output parameter  
2 binding, wherein the program causes operations to be performed, the operations  
3 comprising:  
4           when executing a statement, comparing data in an application structure of the  
5 statement with optimization information in a bind-out structure; and  
6           when there is a match between the data in the application structure and data in the  
7 optimization information in the bind-out structure, executing the statement with the  
8 optimization information.

1           29.    The article of manufacture of claim 28, wherein the operations further  
2 comprise:  
3           when there is not a match between the data in the application structure and the  
4 optimization information, regenerating optimization information.

1           30.    The article of manufacture of claim 28, wherein the operations further  
2 comprise:  
3           at bind time, storing the optimization information in the bind-out structure.

1           31.    The article of manufacture of claim 28, wherein the optimization  
2 information includes at least one of data type, length, Coded Character Set Identifier, an  
3 array size, an indication of whether conversions are required, and an indication of  
4 whether the required conversions are valid.

1           32.    The article of manufacture of claim 28, wherein the operations further  
2 comprise:  
3           for fixed length data,  
4           storing an increment length by which a data pointer that is pointing to data  
5 in an application program area is to be incremented to find a next data value; and

6                   calculating the location of the next data value by adding the increment  
7   length to the data pointer.

1           33.     The article of manufacture of claim 28, wherein the operations further  
2   comprise:  
3           for distributed processing, at a client computer, calculating a location of data in a  
4   client communications buffer.

1           34.     The article of manufacture of claim 28, wherein the operations further  
2   comprise:  
3           for distributed processing, at a server computer, calculating a location of data in a  
4   server communications buffer.

1           35.     The article of manufacture of claim 28, wherein the operations further  
2   comprise:  
3           for distributed processing, at a client computer, calculating a location of data in an  
4   application program address space.

1           36.     The article of manufacture of claim 28, wherein the operations further  
2   comprise:  
3           when returning a handle to a cursor to a result set from a stored procedure to an  
4   application, recalculating the optimization information.

1           37.     A system for input parameter binding, comprising:  
2           when executing a statement, means for comparing data in an application structure  
3   of the statement with optimization information in a bind-in structure; and

1           when there is a match between the data in the application structure and data in the  
2 optimization information in the bind-in structure, means for executing the statement with  
3 the optimization information.

1           38.    A system for output parameter binding, comprising:  
2           when executing a statement, means for comparing data in an application structure  
3 of the statement with optimization information in a bind-out structure; and  
4           when there is a match between the data in the application structure and data in the  
5 optimization information in the bind-out structure, means for executing the statement  
6 with the optimization information.